

## **2016-2017 GRANT SOLICITATION**

### **Low Carbon Transportation and Fuels Investments and the Air Quality Improvement Program**

#### **Off-Road Advanced Technology Demonstration Projects**

Mobile Source Control Division  
California Air Resources Board  
June 9, 2017



California Environmental Protection Agency

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 **Air Resources Board**

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Low Carbon Transportation and Fuels Investments and  
the Air Quality Improvement Program

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## I. SUMMARY

The California Air Resources Board (CARB or Board) is soliciting one or more Grantees to implement and administer the Off-Road Advanced Technology Demonstration Project under the Air Quality Improvement Program (AQIP) and Low Carbon Transportation Greenhouse Gas Reduction Fund (GGRF) Investments, as identified in the Fiscal Year (FY) 2016-17 Funding Plan approved by the Board in June 2016<sup>1</sup>. The Board initially approved a \$59 million allocation for advanced technology demonstration projects during the preliminary approval of the FY 2016-17 Funding Plan, however, the state legislature appropriated less funding than anticipated. Therefore, the Board reconvened in October 2016 to revise the funding allocation for heavy-duty projects and approved \$34 million for demonstration projects. As part of this allocation, this Solicitation for off-road advanced technology demonstration projects anticipates up to \$17 million will be available and several independent grantees may be selected. A separate On-Road Advanced Technology Demonstration Project Solicitation was released on May 19, 2017 and is part of the total allocation for demonstration projects.

This Solicitation intends to accelerate into the California marketplace the introduction of advanced emission reducing technologies on the cusp of commercialization. The technologies demonstrated must have the potential for widespread commercialization and significant transformation of the industry while achieving greenhouse gas (GHG), criteria pollutant, and toxic emission reductions benefitting disadvantaged communities.<sup>2</sup> For heavy-duty off-road equipment (including vehicles) used in freight (i.e., cargo handling, locomotive, and ground support) and non-freight (i.e., agriculture, construction, and passenger transport) operations, these advanced technology demonstration projects will build upon advances from prior demonstration projects by expanding the type and numbers of zero-emission and near zero-emission equipment used in off-road operations and facilitating the opportunity for technology transfer from other applications such as on-road. These project(s) will reduce GHG emissions and provide economic, environmental, and public health co-benefits to disadvantaged communities, while synergistically demonstrating the practicality and economic viability of widespread adoption of advanced off-road technologies. All work must be completed by March 30, 2020. Specific tasks are outlined within this Solicitation. Applications are due to CARB no later than **5:00 p.m., September 7, 2017**.

This Solicitation is issued under the Assembly Bill 118 (AB 118) AQIP Advanced Technology Demonstration Projects and the Low Carbon Transportation Investments, with all project funds coming from the Cap-and-Trade auction proceeds deposited into the Greenhouse Gas Reduction Fund as part of the California Climate Investments (CCI). The project is intended to fund technologies on the cusp of

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<sup>1</sup> The approved Fiscal Year 2016-17 Funding Plan for AQIP and Low Carbon Transportation GGRF Investments is available at <http://www.arb.ca.gov/msprog/aqip/fundplan/fundplan.htm>.

<sup>2</sup> The Disadvantaged Communities, as identified by the California Environmental Protection Agency, are available at [www.calepa.ca.gov/EnvJustice/GHGInvest/](http://www.calepa.ca.gov/EnvJustice/GHGInvest/).

commercialization that further the purposes of AB 32 (Nunez, Chapter 488, Statutes of 2006) and the more recent SB 32, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels.<sup>3</sup> This competitive Solicitation is open to local air districts or other California-based public agencies, as well as California-based non-profit organizations that demonstrate the requisite administrative and technical expertise.

## **II. BACKGROUND**

In 2007, the *California Alternative and Renewable Fuel, Vehicle Technology, Clean Air, and Carbon Reduction Act of 2007* (AB 118, Statutes of 2007, Chapter 750) was signed into law. AB 118 created AQIP, a voluntary incentive program administered by CARB, to fund clean vehicle and equipment projects, air quality research, and workforce training.

As required in Health and Safety Code (HSC) Section 44274(a), the Board adopted regulatory guidelines in 2009 for AQIP. The Guidelines for the AB 118 Air Quality Improvement Program (Guidelines)<sup>4</sup> define the overall administrative requirements, policies, and procedures for program implementation based on the framework established in statute. Central to the Guidelines is the requirement for a Board-approved annual funding plan developed with public input. The funding plan is each year's blueprint for expending AQIP funds appropriated to CARB in the annual State Budget. The funding plan focuses AQIP on supporting development and deployment of the advanced technologies needed to meet California's longer-term, post-2020 air quality goals.

In 2012, the Legislature passed, and Governor Brown signed into law, three bills – AB 1532 (Pérez, Chapter 807), SB 535 (De León, Chapter 830), and SB 1018 (Budget and Fiscal Review Committee, Chapter 39) that established GGRF to receive Cap-and-Trade auction proceeds and to provide the framework for how the auction proceeds will be administered in furtherance of the purposes of AB 32, including supporting long-term, transformative efforts to improve public health and develop a clean energy economy. The suite of implementing legislation offers strong direction for investing a portion of the auction proceeds to benefit disadvantaged communities, including specific allocation requirements in SB 535.

In 2014, the Legislature appropriated nearly \$200 million dollars in GGRF monies to establish a Low Carbon Transportation GGRF program that CARB is implementing in coordination with the AQIP AB 118 programs. Projects funded by the Low Carbon Transportation GGRF program must reduce GHG emissions and further the purposes of AB 32, with a strong emphasis on benefiting disadvantaged communities.

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<sup>3</sup> SB 32 can be found at

[https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=201520160SB32](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32)

<sup>4</sup> The Guidelines for the AB 118 Air Quality Improvement Program are available at [www.arb.ca.gov/msprog/aqip/aqip.htm](http://www.arb.ca.gov/msprog/aqip/aqip.htm).

In order to identify the priority investments that facilitate GHG emission reductions, the legislature directed the development of the Cap-and-Trade Auction Proceeds Investment Plan (Investment Plan).<sup>5</sup> The 3-year Investment Plan, which was released in May 2013, calls for projects that support the large-scale deployment of alternative technologies, such as zero- and near zero-emission vehicles, to help achieve the State's near-term and longer-term GHG emission reduction goals. In addition, SB 535 directs at least 25 percent of funding from GGRF to be allocated toward projects that benefit disadvantaged communities and at least 10 percent of funding from GGRF must be allocated toward projects located within disadvantaged communities, as identified by the California Environmental Protection Agency (Cal/EPA).<sup>6</sup>

Because the Governor's goals for the investment of GGRF monies are consistent with the established objectives of AQIP, and because of the past success of the AQIP structure, staff has combined the two funding sources (AQIP and Low Carbon Transportation GGRF Investments) into one funding plan. The Funding Plan for AQIP and Low Carbon Transportation GGRF Investments is designed to support development and commercialization of advanced technologies necessary to meet California's long-term air quality and climate goals.

This Solicitation is also supportive of Executive Order B-32-15, which directed the development of the California Sustainable Freight Action Plan.<sup>7</sup> This action plan was released July 29, 2016, and includes three main targets:

- System Efficiency Target – Improve freight system efficiency 25 percent by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030.
- Zero-Emission Technology Target – Deploy over 100,000 freight vehicles and equipment capable of zero-emission operation and maximize near zero-emission freight vehicles and equipment powered by renewable energy by 2030.
- Competitiveness and Economic Target – Establish a target(s) for increased State competitiveness and future economic growth within the freight and goods movement industry.

In June 2016, the Board approved the Fiscal Year 2016-17 Funding Plan, which described how CARB would spend \$500 million in proposed Low Carbon Transportation and Fuels funding from GGRF and \$23.6 million from AQIP. In August 2016, the Legislature approved Assembly Bill 1613 (Committee on Budget, Chapter 370), which appropriated \$363 million to CARB for Low Carbon Transportation projects. In October

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<sup>5</sup> The Cap-and-Trade Auction Proceeds Investment Plan is available at <http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/auctionproceeds.htm>.

<sup>6</sup> The identified Disadvantaged Communities census tracts are available at <http://www.calepa.ca.gov/EnvJustice/GHGInvest/>.

<sup>7</sup> CARB et al. California Sustainable Freight Action Plan; July 2016; <http://www.casustainablefreight.org/theplan.html>



2016, the Board approved modifications to the FY 2016-17 Funding Plan to reflect the reduced appropriation and instructed all demonstration funds to primarily focus on projects that support CARB's sustainable freight action plan and benefit disadvantaged communities.

The Funding Plan identifies projects that both provide immediate emission reductions from the vehicles and/or equipment directly funded and, more importantly, set the stage for greater, indirect reductions in the future by accelerating large-scale market penetration and technology transfer to other sectors. Funding is provided for projects that support evolution through three phases of technology advancement: demonstration, commercialization, and transition to widespread deployment. For the demonstration phase, the FY 2016-17 Funding Plan allocated up to \$34 million for the Advanced Technology Demonstration Projects with the intent of incentivizing the deployment of early commercial heavy-duty technologies. These Advanced Technology Demonstration Projects will be split into two separate solicitations, one for heavy-duty on-road vehicles and one for off-road equipment.

### **III. NEED FOR EMISSION REDUCTIONS FROM OFF-ROAD EQUIPMENT**

Heavy-duty off-road equipment is a significant source of GHG, diesel particulate matter (PM), and oxides of nitrogen (NOx) emissions. PM and NOx, a precursor to ozone and secondary PM, are of particular interest throughout California, and heavy-duty off-road mobile equipment is a large contributor to these emissions statewide.<sup>8</sup> Their emissions result in increased health risks and mortality rates, as well as contribute to the challenge of meeting federal clean air standards. In addition, as with other types of pollution, disadvantaged communities are disproportionately affected by such emissions and have vulnerable populations. Heavy-duty off-road equipment play a major role in freight transport and is commonly used in freight support facilities such as distribution centers, warehouses, ports, and intermodal yards. Off-road equipment operating at freight facilities, such as forklifts, yard tractors, top handlers, trains, and marine vessels, handle cargo both off the roads and within the facility. Reducing emissions from these off-road pieces of equipment is not only necessary to meet federally imposed clean air standards, but also to reduce adverse health effects from their emissions, especially in disadvantaged communities.

While recent regulations aim to reduce the emissions impact from off-road equipment, the continued development and demonstration of advanced technologies are necessary to reach California's long-term GHG emission reduction goals, protect public health, and reach attainment with increasingly more stringent federal air quality standards. Projects selected under this Solicitation to demonstrate advanced technologies should be able to provide a significant reduction in GHG emissions and improve air quality for many

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<sup>8</sup> The distribution of PM and NOx emissions from mobile source on-road and off-road applications (including agriculture, trains, and marine sources) are available at <http://www.arb.ca.gov/regact/2014/truckbus14/tb14isor.pdf>.

affected areas within the state when the technology is fully integrated into the marketplace.

#### **IV. CURRENT TECHNOLOGY**

There are a variety of advanced emission reducing technologies applicable to heavy-duty off-road equipment that meet the objectives of this Solicitation, ranging from those currently commercially available and have the potential to be expanded into new applications to those that have surpassed the research and development phase, but have not yet been introduced into the marketplace. As discussed below, there are significant opportunities to showcase the commercial viability and suitability of such technologies in off-road equipment.

##### **A. Cargo Handling Equipment**

Cargo handling equipment has already seen a strong push toward zero-emission technology driven both by economic and regulatory<sup>9</sup> goals. For example, there has been appreciable interest in electric yard trucks in freight operations, and a number of electric yard truck demonstrations have already been funded through programs implemented by CARB and/or other agencies. However, there has been much less activity in higher tonnage equipment operating at ports and intermodal rail yards, such as reach stackers, top handlers, and high lift-capacity forklifts powered by diesel, for which there is immense potential to significantly reduce GHG and criteria pollutant emissions with zero-emission technologies.

There are also opportunities to expand the use of technology that has already achieved market success in one application to other, more-demanding applications. A specific example of this is the battery-electric technology used in lift trucks. Battery-electric lift trucks with a 6,000-pound lift capacity can commonly be found in warehouse and distribution center environments. However, commercially available electric lift trucks are currently limited to about a 20,000-pound lift capacity.<sup>10</sup> Expanding battery-electric technology to larger lift-capacity forklifts (up to 40,000-pounds) traditionally powered by diesel fuel is a promising next step, and Low Carbon Transportation Investments can be used to help spur innovation and further reduce emissions locally and regionally.

##### **B. Advanced Port Equipment**

Cargo handling equipment is an important category to transition to zero-emission, but another technology category that has great potential to reduce GHG emissions and criteria pollutants is equipment that can increase operational efficiencies. This could include zero-emission vessel automated container movement technologies, advanced logistic strategies, and other equipment or strategies that enable more efficient operations. Improving the efficiency and logistics of ports could help reduce GHGs by

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<sup>9</sup> For more information regarding CARB's regulatory activities for cargo handling equipment, visit <https://www.arb.ca.gov/ports/cargo/cargo.htm>

<sup>10</sup> A comparison of forklift propulsion systems is available at [www.transportation.anl.gov/pdfs/TA/537.pdf](http://www.transportation.anl.gov/pdfs/TA/537.pdf).

reducing idling time, right sizing the amount of effort required to perform a specific task, and improving accuracy and scheduling in order to improve the movement of goods through the ports.

As an example, replacing manually-operated diesel-fueled cargo handling equipment with automatically controlled electric or fuel-cell electric hybrid vehicles and/or equipment using sophisticated software designed to more efficiently move goods within a facility is one of the many promising technologies that warrants consideration.

#### C. Ground Support Equipment

Similar to cargo handling equipment, airport ground support equipment (GSE) will play a role in future deployment of zero-emission off-road equipment. Zero-emission GSE is readily available and in widespread use in a number of applications, such as belt loaders, baggage tugs, and cargo tractors.

The types of GSE that could benefit from demonstrations are those applications that require higher tow and/or lift capacity and longer range. For example, aircraft tugs, with advanced batteries capable of heavier duty-cycles and longer range needed to reliably move heavier aircraft and move aircraft longer distances, could benefit from being demonstrated in a zero-emission application where the equipment dependably performs under all required airport conditions.

#### D. Locomotive Technologies and Operations

The baseline for locomotives is the current Tier 4 national emissions standards<sup>11</sup>, and they conventionally meet these requirements through the use of diesel-electric configurations. The goal of this funding category is to demonstrate on-board energy systems in order to provide supplemental motive power and reduce fuel consumption and GHG emissions in a locomotive application. Some potential technologies this could include are energy storage solutions, such as batteries, and zero-emission energy generation systems, such as fuel cells, utilizing on-board storage or locomotive tenders.

One application that is of particular interest is a switcher application. Switching service consists of moving railcars from track to track (industrial switching or interchange tracks), between different locations on the same track (general movement within terminals or at junctions), and to and from trains (local or regional service). These applications could be a good fit for demonstrations because (1) areas of operations often occur in close proximity to disadvantaged communities, (2) given operations are concentrated in rail yards, so the energy demand may be met by battery and fuel cell technologies, and (3) demonstrations in these applications increase the potential for use of such technologies in higher horsepower applications such as class 1 line haul locomotives.

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<sup>11</sup> For more information regarding the U.S. EPA's current locomotive standards, visit <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-emissions-locomotives>

#### E. Non-Freight Categories (Agriculture, Construction, Passenger Transportation)

The main goals of this Solicitation for the identified non-freight categories are to transfer and expand the technology advancements from other categories, like the on-road truck and bus category, to off-road segments like agriculture, construction, and passenger transportation equipment, and support the expansion of energy storage systems into other transportation sectors.

The current state of the technology in these operations varies greatly between not only each category, but the equipment within each category as well. Potential projects should go above and beyond what has already been achieved and demonstrate advanced technologies that emit less GHG and criteria pollutant emissions than what is currently available for sale. As some examples, the types of technology that could fit into this demonstration include, but are not limited to, electric drive powertrains, hybridization, automation strategies leading to efficiency gains, engine efficiency technologies, advanced energy storage strategies, and new applications of zero- or near zero-emission technologies.

### **V. AVAILABLE FUNDING**

The anticipated total CARB funding available through this Solicitation for off-road equipment is up to \$17 million. If additional funds become available, and valid applications remain unfunded, those projects may be funded without reissuing a solicitation.

This Solicitation may fund such activities as production and deployment of prototypes, infrastructure, emissions testing, and practical demonstrations of technologies with a high potential to be commercialized. It may not be used to fund basic research, design-only projects, or commercial production. Field demonstrations of practical utility are required.

Funding is available for the following:

- Equipment, technology, and infrastructure production and installation;
- Demonstration of the deployed equipment, technology, and infrastructure;
- Administrative costs (administrative costs shall not exceed 5 percent of the project amount funded by CARB); and
- Data collection and emission testing.

To ensure equitable distribution of funding among potential Grantees as well as diversity in technology type, CARB, in its sole discretion, may apply the following caps to the funds available under this Solicitation:

- No more than 75 percent of the funding for projects under this Solicitation may be awarded to a single grantee;

- No more than 60 percent of the funding at any time may be allocated toward projects involving a single technology type (battery or battery dominant hybrid, fuel cell or fuel cell dominant hybrid, or other low CO<sub>2</sub> technologies).

If a single application contains differing technology types, the applicant will include in their proposed budget (outlined in Appendix A, Attachment 4) the total costs attributed to each specific technology type, and CARB will determine what percentage of the project will be considered for each technology type in order to properly adhere to the previously mentioned technology cap.

A majority of the total \$17 million will be allocated to projects that adhere to the focus on freight applications, but a small amount of the funding may be available for off-road demonstration projects which are outlined as “non-freight” in the FY 16/17 Funding Plan. The eligibility criteria for such projects are outlined in Section IX, Eligible Projects. These non-freight proposals will have the opportunity to compete for up to \$3 million out of the total \$17 million under this Solicitation and will be scored against each other. Grants may be awarded to the top scoring non-freight proposal(s) totaling less than \$3 million. The proposals for these projects must discuss the potential of the technology to be freight enabling after being successfully demonstrated (more details for this criteria are outlined in Section XV, Evaluation, Scoring, and Preliminary Selection). If CARB staff determines that the applicant has failed to adequately support the assertion that the demonstration is freight enabling, CARB, in its sole discretion, reserves the right to reject the application. CARB also reserves the right to not award any grants in this category.

In the event additional funding is provided from Low Carbon Transportation GGRF Investments for the Off-Road Advanced Technology Demonstration Project, these funds may be administered under this Solicitation at CARB’s sole discretion.

## **VI. REQUIRED MATCHING FUNDS**

The Grantee is required to match a minimum of 25 percent of the total project cost. Match funding must be provided in the following manner:

- A minimum of 10 percent of the total project cost must be in the form of cash committed by the Grantee, federal and local public agencies, project partners, and/or technology manufacturer (exclusive of providing in-kind contributions). Cash includes labor and capital outlays during the term of the Grant Agreement.
- Fifteen percent or more of the total project cost may be through some combination of in-kind contributions, such as labor, equipment, materials, equipment transportation, private financing, and federal; state; or local funds. Project facilities, laboratories, or real property will not be considered as part of a proposed in-kind match whether owned or leased by the Grantee or technology manufacturer.

While other publicly funded projects may work in coordination with this program, none of those funds or anything funded by those projects may be included in fulfilling any of the 25 percent match requirement. However, assets from publicly funded projects can be counted toward the 15 percent in-kind match if the contract requirements are complete at the time of the application. For example, electric charging or fueling infrastructure funded under another State project may be leveraged to support an Off-Road Advanced Technology Demonstration Project, but may only be used to meet part of the Grantee match requirements if the contract requirements with the State for that fueling infrastructure are no longer in effect.

The applicant may propose to use an in-kind administrative match contribution as an eligible expense for activities to be performed after the issuance of a preliminary award of funding and before the execution of the projects grant agreement. Such activities may include completing California Environmental Quality Act (CEQA) requirements, entering into sub-agreements with technology manufacturers and end-users, and performing other administrative activities required by the prospective grantee to enter into the grant agreement. However, an applicant does this at its own risk and with no guarantee that a grant agreement will be executed. CARB will not reimburse the prospective grantee for any costs incurred before the grant agreement is executed.

If a third party, (i.e., a party other than the Grantee or technology manufacturer) proposes to provide any part of the required match, the Grantee must include a letter from each third party stating that it is committed to providing a specific dollar value of cost sharing and the source of such funds. A Grantee and its partners must demonstrate technical and financial resources sufficient to meet their cost share commitment and complete the proposed project.

## **VII. ELIGIBLE GRANTEES**

This competitive Solicitation is open to local air districts, other California-based public entities, or California-based non-profit organizations acting as the Grantee (applicant) for the application. The Grantee must demonstrate its expertise at implementing demonstration projects and providing administration and oversight for demonstration projects. Private sector parties (i.e., technology manufacturers and end-users) interested in demonstrating a strategy must partner with an air district, other California-based public entity, or California-based non-profit organization in submitting a demonstration application. Only projects from eligible Grantees will be scored.

Eligible applicants must meet all applicable requirements of State law and regulations, the AQIP Guidelines and FY 2016-17 Funding Plan, and this Solicitation. Specific requirements for the Grantee are further described in this Solicitation. To be considered for a grant award, applicants must fully complete the AQIP and Low Carbon Transportation GGRF Application (Appendix A) and demonstrate that they meet the Application Requirements (see Section XII of this Solicitation). CARB may request clarification regarding application responses during the application review process.

An eligible Grantee may request demonstration project funds without an identified technology manufacturer(s), provided they commit in the application to solicit for the project partners once funds are secured from CARB via this competitive Solicitation process. However, projects that already have all the needed participants, such as the identified end user of the proposed equipment, technology manufacturer(s), data analysis provider, and eligible Grantee will score higher than those that do not have team members identified in advance (see criterion 2 in Section XV, Evaluation, Scoring, and Preliminary Selection).

The public agency or non-profit organization will be required to submit a resolution of its governing board prior to execution of the Grant Agreement that commits the agency/organization to:

- Comply with the requirements of advanced technology demonstration projects;
- Accept the Grant funds from CARB; and
- Allocate any funding that the Grantee has committed to be part of a project application.

It is recommended that the resolution allow for grant amendments without governing board approval, if possible. If the public agency or non-profit organization does not have a governing board, then a binding written commitment from an official of the agency that has authority to enter into contractual obligations will be required to fulfill the above commitments.

If the public agency or non-profit organization that is submitting the application contributes a match to the project, the governing board resolution shall authorize the agency's or organization's legally authorized official to supply sufficient funding to meet the stated match commitment. Signed Grant Agreements and approved governing board resolutions need to be in place on or before the deadline listed in this Solicitation Timeline outlined in Section XIII, Application Instructions. Sub-agreements between the technology manufacturer(s) and the Grantee need to be in place before non-administrative work can begin.

## **VIII. RESPONSIBILITIES OF GRANTEE, TECHNOLOGY MANUFACTURER, AND DATA COLLECTION AND ANALYSIS PROVIDER**

The entity proposing to be the Grantee will be responsible for administration of the demonstration project, and major responsibilities will include:

- Developing the project team, including technology manufacturer, end-user fleet, and data collection and analysis provider;
- Submitting the demonstration application to CARB;
- Administering the project;
- Coordinating press releases and press events;
- Ensuring completion of required CEQA documents;
- Overseeing technology manufacturer(s);

- Overseeing the project budget, completion of milestones, and verify receipt of deliverables and the amount of funds being used for the project's match requirement;
- Reporting to CARB on project status and Grant performance;
- Submitting periodic reports and Grant disbursement requests to CARB;
- Ensuring purchase, installation, and maintenance of data logging or other data collection equipment;
- Submitting data, as requested by CARB; and
- Coordinating periodic project status update meetings.

The technology manufacturer's major responsibilities in the demonstration project will include:

- Teaming with an air district, other public agency, or non-profit organization to develop the demonstration project application;
- Providing the technical expertise in performance of the demonstration;
- Timely achievement of stated demonstration project goals; and
- On-time reporting to the Grantee on project status and Grant performance.

The data collection and analysis provider's major responsibilities in the demonstration project will include:

- Teaming with an air district, other public agency, or non-profit organization to develop the demonstration project application;
- Installation and maintenance of data collection equipment on advanced technology and baseline off-road equipment;
- Coordination with CARB, Grantee, and technology manufacturer on data to be collected; and
- Collection, analysis, and reporting of collected data.

Progress reports from the technology manufacturer(s) shall be submitted to the Grantee at a minimum of three-month intervals. The Grantee is responsible for forwarding all progress reports, unaltered, to CARB within seven business days of receipt from the technology manufacturer(s) (see Reporting and Monitoring Requirements in Section XVII, Implementation Process). Additionally, every Grant disbursement request shall be accompanied by a progress report, in addition to any other required reports, that documents the time interval and the completion of specific project milestones, including any specific deliverables as defined for that milestone (see Project Funding Procedure in Section XVII, Implementation Process).

In order to ensure consistent data analysis across all heavy-duty demonstration projects, the specific data elements that will be required to be collected and required formats are listed in Appendix F, Data Collection Requirements.

Data collection will be required throughout the demonstration project, and the data gathered will be required to be submitted to CARB periodically and as part of project milestones and periodic project update reports. The Grantee must coordinate installation of data logging or other equipment to facilitate data collection. The types of



data to be collected include, but are not limited to, fuel/electricity consumption, fueling/charging times, state of charge information, odometer readings, maintenance information, relevant telematics and GPS data, operating costs, hours of operation, idle times, temperatures, and user experience. Data collection and emission testing will also be required for baseline equipment, where appropriate. The Grantee will include as part of the project team a data collection and analysis provider. The Grantee will ensure that the data collection and analysis provider will have access to representative baseline pieces of equipment with comparable duty-cycles. Emission testing protocols will be approved by CARB, in its sole discretion.

A final report must be submitted to CARB from the Grantee at the conclusion of the demonstration project. The demonstration project will not be complete until the final report has been accepted by CARB. The final report will include, but will not be limited to, a summary of the progress reports, any deliverables that were committed to in the project, the results from any emission testing performed, and any other information required by CARB. The Draft final report is due to CARB no later than February 14, 2020, and the final report is due to CARB no later than March 30, 2020 (see Sample Grant Agreement, Appendix B). CARB retains the right to withhold up to 10 percent of the total award amount until delivery of the final report.

Additional reporting requirements are detailed in the Reporting and Monitoring Requirements in Section XVII (Implementation Process) of this Solicitation.

## **IX. ELIGIBLE PROJECTS**

The projects covered by this Solicitation require the use of advanced technologies that achieve significant reductions in GHG, criteria pollutant, and toxic emissions that directly benefit disadvantaged communities. Only projects that provide benefits to disadvantaged communities, as specified in this Solicitation, will be scored. Projects that meet the criterion for being located within a disadvantaged community census tract will score more competitively, but projects that meet the criteria for providing a benefit to a disadvantaged community are also eligible for consideration for funding.<sup>12</sup> To determine whether a project qualifies as benefitting a disadvantaged community, applicants must use the criteria in CARB's Interim SB 535 Guidance.<sup>13</sup> Applicants are required to make an affirmation in their application Project Narrative (see Appendix A, Attachment 2) as to which criteria is being satisfied from Step 1 or Step 2 of Attachment 5 in Appendix A, and the reason that criteria has been satisfied, including any site- or route-specific information used to make that determination.

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<sup>12</sup> The identified Disadvantaged Communities census tracts are available at <http://www.calepa.ca.gov/EnvJustice/GHGInvest/>.

<sup>13</sup> CARB's SB 535 Guidance, Appendix A, contains the criteria for determining whether a project is located within a disadvantaged community or provides a benefit to a disadvantaged community. This Guidance is available at [https://www.CARB.ca.gov/cc/capandtrade/auctionproceeds/final\\_supplemental\\_ggrf\\_funding\\_guidelines\\_12\\_30.pdf](https://www.CARB.ca.gov/cc/capandtrade/auctionproceeds/final_supplemental_ggrf_funding_guidelines_12_30.pdf)

The technologies for the projects funded under this Solicitation must not yet be commercially available in the application in which the technologies will be demonstrated (i.e., not yet produced for sale), but projected to be within three years of commercialization. Projects must support demonstration of full zero-emission and near zero-emission technologies in off-road equipment and either help support the sustainable freight action plan or be freight enabling. Fueling and charging infrastructure to facilitate the successful demonstration of technologies and logistics/operations efficiency improvements may also be included. In addition, projects that can build on synergies generated from established infrastructure investments and experience with existing zero-emission technologies are encouraged to apply.

Projects that would not provide a direct GHG benefit (e.g., projects that solely rely on the use of renewable fuel for their GHG emission reductions) are not eligible under this Solicitation.

Any projects that would involve demonstration of advanced technologies in an on-road application (e.g., on-road tractor or drivetrain technologies) are considered on-road projects and not eligible for funding under this Solicitation. Therefore, projects that would demonstrate advanced transport refrigeration unit (TRU) technologies are only eligible under this Solicitation if such projects do not include an on-road demonstration element.

The following project types, which were identified in the FY 16/17 Funding Plan<sup>14</sup>, will be considered under this Solicitation:

- *Zero-Emission Cargo Handling Equipment:* Advanced zero-emission technologies in this category have tremendous potential to reduce emissions of GHGs and criteria pollutants because cargo handling equipment is widely used in California. Cleaner technologies in this category also have the potential for broad applicability in other sectors. Demonstrations for applications that have not yet reached commercial deployment could include zero-emission technologies for high lift capacity forklifts, reach stackers, and other cargo handling equipment operating at ports or intermodal rail yards. Eligible technologies are expected to provide zero-emission operation for at least part of the duty-cycle.
- *Zero-Emission Ground Support Equipment:* Projects should be designed to demonstrate advanced technologies and strategies that go beyond the current state of technology for airport ground support equipment and aircraft. Examples of technologies include battery electric, fuel cell electric, and flow batteries, and strategies that can reduce emissions from aircraft while being loaded or unloaded, taxiing, and queuing. Equipment is expected to be capable of zero-emission operation during a substantial part of its duty-cycle to be eligible.

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<sup>14</sup> The full Fiscal Year 16/17 Funding Plan can be found at [https://www.arb.ca.gov/msprog/aqip/fundplan/proposed\\_fy16-17\\_fundingplan\\_full.pdf](https://www.arb.ca.gov/msprog/aqip/fundplan/proposed_fy16-17_fundingplan_full.pdf)

- *Advanced Port Equipment:* Projects should be designed to demonstrate advanced technologies and strategies, such as zero-emission vessel automated container movement technologies, advanced logistic strategies, or other equipment or strategies that enable more efficient port operations.
- *Zero-Emission Locomotive Technologies and Operations:* Projects in this category are expected to demonstrate on-board energy storage systems to provide supplemental motive power to locomotives to reduce fuel consumption and GHGs as well as provide zero-emission operation for short periods. Projects could be designed to demonstrate locomotive tenders used for energy storage, such as batteries, and zero-emission energy generation systems, such as fuel cells, to facilitate zero-emission operation for part of the locomotive duty-cycle.
- *Non-Freight Off-Road Equipment:*
  - *Advanced Technologies and Efficiencies for Agricultural Equipment:* This category is intended to demonstrate and deploy advanced technologies that reduce GHG and criteria pollutant emissions for off-road mobile agricultural equipment. Projects could include low NOx engines, electric drive powertrains, hybridization, automation strategies leading to efficiency gains, and new applications for zero- or near zero-emission technologies.
  - *Advanced Technologies and Efficiencies for Construction Equipment:* This category is intended to demonstrate and deploy advanced technologies that reduce GHG and criteria pollutant emissions on off-road mobile construction equipment. Projects could include hybrid bulldozers or front loaders; new applications for zero- and near zero-emission technologies; and engine, powertrain, and automation strategies leading to efficiency gains.
  - *Advanced Technologies for Off-Road Passenger Transportation:* This category is intended to demonstrate advanced, emission-reducing technologies for in-state passenger transport. Ferry projects could include use of fixed wing sail technology that builds on successful past demonstrations or use of fuel cells or other technologies to reduce emissions. Passenger locomotive demonstrations could include fuel cells, hybrid technologies, advanced energy storage strategies, and other emission reduction technologies. Other project types may also be considered.

This competitive Solicitation is expected to accelerate zero-emission technology into the marketplace. Projects that can utilize full zero-emission technology may score higher than those technologies that only partially eliminate emissions (near zero-emission). Projects that specifically target freight equipment in order to support the California

Sustainable Freight Action Plan may also score higher.<sup>15</sup> The specific non-freight categories mentioned above will still be eligible for a smaller portion of the total funding (more details are outlined in Section V, Available Funding), but applications must include justification showing how the demonstration could be freight enabling. With such a diverse range of potential applications, projects selected under this Solicitation to demonstrate advanced technologies should be able to provide a significant improvement in air quality for many affected areas within the state when fully integrated into the marketplace.

## **X. SCOPE OF WORK**

This section provides information on the project's scope of work. Any requirements identified below are minimum requirements and are not comprehensive. In addition to the information below, the scope of work includes reporting and monitoring requirements as detailed in Section XVII under the Reporting and Monitoring Requirements subsection.

All equipment funded under this Solicitation will be required to install data collection equipment that can track the equipment in real time and provide data on the position of the equipment and when it is in operation in a disadvantaged community as well as collect data on equipment operation. Minimum data collection elements can be found in Appendix F.

Practical field demonstrations are required for pieces of equipment funded under this Solicitation. Field demonstrations must be done while the pieces of equipment are in revenue service in their intended vocation by the fleet partner included in the project application. Field demonstrations should provide enough data to determine the economic viability for the continued use of the advanced technology pieces of equipment and must collect the relevant data items identified in Appendix F. Field demonstrations must be at least three months in duration, however, a field demonstration of six months or more will be more desirable.

### **A. Data Collection, Analysis, and Emission Testing**

Data collection will be a required element of all funded projects. Data analysis, an important part of each project, will be accomplished by a member of the proposed project team. All types of data to be collected will be determined at CARB's sole discretion, in consultation with the project's technology manufacturer(s), data collection and analysis provider, and Grantee. All project team participants must work cooperatively with the data analysis provider and supply data as requested in a timely manner. The sharing of data collected from pieces of equipment, infrastructure, operators, and other relevant equipment with the project team and CARB is required.

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<sup>15</sup> CARB et al. California Sustainable Freight Action Plan; July 2016;  
<http://www.casustainablefreight.org/theplan.html>.

Reproducible emission testing for internal combustion engines to verify the emission benefits from the demonstration of technologies funded under this Solicitation will be required to be performed. If NO<sub>x</sub> emissions are being measured, the result will be shown as NO<sub>x</sub> and nitric oxide (NO) plus nitrogen dioxide (NO<sub>2</sub>). The emission testing procedure used to verify emission reductions should be cited in the project's narrative (see Appendix A, Attachment 2). The final emission testing procedure will be subject to CARB approval.

A "well-to-wheel" analysis to quantify greenhouse gas emission reductions is required for all equipment funded under this Solicitation. The applicant is required to determine the resulting emission reductions associated with their project (see Appendix D for the methodology). All calculations must be shown in their entirety and included in the application (see Appendix A, Attachment 3). Incomplete illustration of the mathematical processes used will result in no points being allocated for scoring criterion 6 and reduced points allocated under scoring criterion 11 in Section XV, Evaluation, Scoring, and Preliminary Selection, as well as possible disqualification.

If the applicant believes the methodology for determining emission reductions and cost effectiveness is not representative, the applicant may use an alternative methodology to calculate the potential emission reductions and cost effectiveness. In such case, the applicant must submit:

- Emission reductions and cost effectiveness determined in accordance with the applicant's alternative methodology;
- Emission reductions and cost effectiveness determined in accordance with the required methodology as outlined in Appendix D; and
- A description as to why the methodology outlined in Appendix D does not accurately represent their emission reduction potential.

Projects will only be scored based on the required methodology for determining emission reduction and cost effectiveness.

Data collected from emission testing as part of a selected demonstration project and data included in the project's submitted work plan and scope of work can be applied toward CARB or United States Environmental Protection Agency (U.S. EPA) certification or verification. However, AQIP funds or GGRF Low Carbon Transportation investments cannot be used directly to fund formal CARB or U.S. EPA verification or certification processes.

If the project uses any engine, retrofit, or piece of equipment that has been or will be funded in whole or part by another public program and is still under contractual obligations, the equipment and the contract status must be identified in the project's narrative. Furthermore, the project narrative must also include a plan to ensure that emission reductions are not concurrently counted toward this Solicitation (see Appendix A, Attachment 2).

### B. Vehicle Certification, Verification, and Permitting

All vehicles in the proposed project that will be operated on California roadways must be compliant with all State requirements, including, but not limited to, CARB Experimental Vehicle Permitting, Department of Motor Vehicles licensing, California Highway Patrol requirements, and others. Further, the operational demonstration of the proposed vehicles must be approved by the intended operators, and the confirmation of such approval must be indicated in the operator's letter of support. A clear explanation of what steps are required in the process for legal operations on California roadways, usage on port properties, rail yards, and other sites where the vehicle will be operated, must be indicated. Instructions will not be provided as part of this Solicitation as to the pathway to certification or verification.

As part of a viable commercialization plan CARB verification or certification, as required, must be the ultimate goal of all vehicles and equipment funded under this Solicitation. For any technology that will require CARB verification or certification or U.S. EPA certification or consideration, the applicant must explain in the project narrative the steps that will be followed to accomplish required government certification and verification protocols. Projects selected for funding will require all submittals of documents to non-CARB certifying authorities to be concurrently submitted to CARB and discussed during the routine Project Update meetings as outlined in Section XVII, Implementation Process.

### C. Repowers and Conversions

Projects containing a repower or conversion component will be required to meet certain criteria. Repower means removing an existing internal combustion engine and replacing it with a near zero-emission hybrid system that includes a new internal combustion engine that meets a more stringent emissions standard, regardless of the beginning and ending fuel types (e.g., a 2005 model year diesel engine repowered with a 2014 model year natural gas engine). A conversion means removing the existing internal combustion engine and replacing it with a zero-emission system (e.g., a diesel-fueled vehicle converted to an electric vehicle or fuel cell vehicle). The following criteria apply to repowers and conversions:

- An off-road piece of equipment repowered with a hybrid system must achieve at least some zero-emission operation during its duty-cycle. Projects will be scored according to the amount of zero-emission operation the piece of equipment can perform during one full duty-cycle (e.g., a repower with a hybrid-electric system that can achieve all-electric operation during 50 percent of an entire duty-cycle will score higher than one that can achieve all-electric operation during 25 percent of an entire duty-cycle).
- Conversions or repowers of existing pieces of equipment are limited to pieces of equipment that the applicant can demonstrate will have a remaining useful life of at least 10 years.

#### D. Fueling Infrastructure

Infrastructure necessary for operating equipment that is the subject of this Solicitation is an eligible cost. Proposed infrastructure should be capable of allowing a robust and significant field demonstration of the proposed technology. Projects that propose only infrastructure without accompanying pieces of equipment will not be scored.

CARB will only process applications for infrastructure projects where the project is proposed to be sited where similar infrastructure already exists (e.g., installing electric vehicle supply equipment where electrical infrastructure already exists, or installing a hydrogen refueling station at an existing fueling station or industrial facility). Proposed projects that can synergistically take advantage of existing fueling or charging infrastructure should show a cost-effective advantage to other proposed projects that will require stand-alone infrastructure to be installed as part of a project. In addition to a cost-effective advantage, projects which utilize existing fueling or charging infrastructure will most likely require less time to start demonstrating the technology, and this has the potential advantage of showing that the demonstration can feasibly complete all work by March 30, 2020.

Emission reductions associated with any infrastructure funded by this Solicitation are not allowed to be included as part of the emission reduction totals that will be considered during proposal scoring. In other words, emission reductions will only be assigned to the advanced technology equipment funded under this Solicitation.

Proposed infrastructure costs must be substantiated by qualified entities with experience in the installation, permitting, and commission of the proposed infrastructure type. Any infrastructure proposal should indicate all the required steps including, but not limited to, siting, permitting, safety certifications, and other necessary certifications. Operation and maintenance of any proposed infrastructure must be addressed in the project application budget. The amount of funds proposed in the application for infrastructure that will be funded by the grant will be the total amount of funds that CARB will devote to infrastructure funding. **NOTE: If the actual infrastructure costs exceed the proposed amount of funds allocated in the application, the difference must be covered by the applicant.**

Charging/refueling stations that, in addition to the project equipment, allow other advanced technology vehicles not being funded, such as zero-emission commercial medium-duty trucks and buses or private light-duty electric or fuel cell vehicles, to charge/refuel are encouraged and may be scored higher.

##### *1. Hydrogen Refueling Stations*

Proposals containing a hydrogen refueling station installation must adhere to the minimum technical requirements and renewable hydrogen requirements specified in Appendix C and the CEQA and permitting requirements described in Appendix E. Additionally, the project must comply with all applicable federal, state, and local laws and requirements for acceptable installation and usage of hydrogen refueling stations. Each hydrogen refueling station must be designed to allow the hydrogen refueling

station to accept delivery of hydrogen fuel from a mobile refueler or hydrogen tube trailer if on-site hydrogen production goes off-line or if hydrogen delivered via a pipeline is disrupted. Public or private access to refueling from proposed refueling stations is not required. However, infrastructure proposals designed to allow refueling by non-project entities during or following the completion of the demonstration project may score higher than those that do not allow refueling by non-project entities. As noted above, CARB will only process applications for infrastructure projects (including hydrogen refueling stations) where the project is proposed to be sited where similar infrastructure already exists (e.g., installing a hydrogen refueling station at an existing fueling station or industrial facility).

## *2. Electric Vehicle Supply Equipment*

Proposals containing electric vehicle charging infrastructure installation must adhere to the CEQA and permitting requirements described in Appendix E, and the project must comply with all applicable federal, state, and local laws and requirements for acceptable installation and usage of electric vehicle supply equipment (EVSE). For the purposes of this Solicitation, EVSE is meant to include all equipment necessary to charge a piece of advanced technology equipment that is not inherently incorporated within the vehicle itself. Any proprietary protocol may additionally be superimposed on the system, provided the site owner is able to revert to the open standard protocol. The proposal must include a maintenance plan for continued reliable operation and unforeseen breakdowns of the EVSE. Public access to charging from proposed EVSE is not required. However, projects designed to allow charging by non-project entities during or following the completion of the demonstration project may score higher than those that do not allow charging by non-project entities. As noted above, CARB will only process applications for infrastructure projects (including EVSE installations) where the project is proposed to be sited where similar infrastructure already exists (e.g., installing electric vehicle supply equipment where electrical infrastructure already exists).

## **XI. PROPRIETARY INFORMATION AND INTELLECTUAL PROPERTY**

CARB will not make any claims as to ownership of equipment funded by this grant. However, all information and data generated under the Grant Agreement are the property of CARB. Additionally, the technology manufacturer(s) and Grantee will make available any information and data needed to satisfy the requirements discussed in Section XVII under the Reporting and Monitoring Requirements subsection.

Data gathered on actual emissions to the air as part of this demonstration project cannot be protected from disclosure. Any information determined to be a trade secret or otherwise exempt from disclosure under the California Public Records Act or other provisions of law must be labeled “confidential.” Review Appendix A, Attachment 6 for Procedures for Handling Confidential Information. If you wish to include confidential information, you must:

- Complete the Confidentiality Provision (Appendix A, Attachment 6) and attach it to your application;
- Separate confidential pages from the other elements of the application (do not



include any confidential information in the main application) and submit them as a separate cover; and

- Clearly label every confidential page as “CONFIDENTIAL.”

Applications will be reviewed by CARB staff and may include reviewers outside of CARB associated with public universities in California and other State government agencies as needed. The applicant should not include any confidential information in the main application and should only reference the existence of the confidential information under the separate cover. Please provide the name, address, and telephone number of the individual to be contacted if CARB receives a request for disclosure of the information claimed as confidential. CARB may share confidential information related to a demonstration project (such as certification/verification data) with multiple units and sections within CARB or other relevant State agencies.

## **XII. APPLICATION REQUIREMENTS**

Eligible Grantees must meet all applicable requirements of State law and regulations, the AQIP Guidelines, the Funding Plan, and this Solicitation. To be considered for the grant award, Grantees must complete the application and demonstrate that they meet the required Solicitation elements. CARB may request clarification regarding application responses during the application review process. Only applications that contain all of the required elements as described in the Required Application Elements section and Appendix A of this Solicitation will be scored.

Please enclose with your application any documents (or pertinent excerpts) that you cite in support of performance claims in your project. However, only materials containing the information requested in these instructions should be supplied. CARB will not review patent documents, engineering drawings and specifications, or promotional materials. Include in your application package letters of support from project partners that describe the nature of their contribution to the project.

Letters of support from non-project partners are discouraged and are not part of the scoring criteria. However, letters of commitment from community groups that are part of the project team are required and should detail the level of support for the project and describe what role the community group plays in the project. Further, letters should discuss the level of support the project has in the disadvantaged community(ies) where the project is located and/or providing benefits to, and indicate the group's role in the community. Strong support from community groups may score more competitively under the Benefits to Disadvantaged Communities Scoring Criteria 8, described in Section XV Evaluation, Scoring, and Preliminary Selection section.

The submitted application package must include four (4) copies in addition to the signed original and one (1) compact disc (CD). The CD must contain the application package, including all required documents, as a single electronic file in either Microsoft Word or Portable Document Format (PDF). Applications that do not meet the above requirements may not be scored and may be disqualified.

## Required Application Elements

CARB requires applications to be accurate, and applicants are strongly encouraged to ensure their applications are brief and clear. Applications will be initially screened for completeness; incomplete applications will not be scored. The application of this Solicitation is included as Appendix A - AQIP and Low Carbon Transportation GGRF Application. Applications must be signed, be dated, and include the following required elements:

- Attachment 1: Project Executive Summary and Project Summary for Public Posting
- Attachment 2: Project Narrative and Work Plan
- Attachment 3: Emission Reduction and Cost-Effectiveness Calculations
- Attachment 4: Proposed Budget, Project Milestone, and Disbursement Schedule
- Attachment 5: Disadvantaged Communities Eligibility Determination
- Attachment 6: Procedures for Handling Confidential Information
- Attachment 7: California Environmental Quality Act Worksheet (if applicable)
- Attachment 8: Letters of Commitment
- Attachment 9: Applicant Qualifications
- Attachment 10: Conflict of Interest Declaration
- Attachment 11: STD. 204 Payee Data Record (**required even if applicant is a public entity**)

## XIII. APPLICATION INSTRUCTIONS

Appendix A contains the forms and information necessary for submittal of a complete application. CARB will select a Grantee based upon the scoring criteria identified in this Solicitation. All information and data submitted as a response to this Solicitation are the property of CARB and will become a public record. If no qualified proposal is submitted, CARB will not award a grant and will re-evaluate this Solicitation to re-solicit for applications or consider other options at CARB's sole discretion.

If you need this document in an alternate format or language, please contact Nathan Dean at (626) 575-6998 or [nathan.dean@arb.ca.gov](mailto:nathan.dean@arb.ca.gov). TTY/TDD/Speech to Speech users may dial 711 for the California Relay Service.

One (1) signed original, four (4) copies, and one (1) CD of the application, including all of the required documents, must be received at the California Air Resources Board at 9480 Telstar Ave No. 4 El Monte, CA 91731. The CD must contain the application and other required documents, all in a single Word or PDF file.

Applications must be mailed to the following address:

California Air Resources Board  
Mobile Source Control Division  
9480 Telstar Avenue No. 4  
El Monte, California 91731  
Attention: Nathan Dean

Applications submitted must be dispatched with enough time to be received by CARB no later than **5:00 p.m. (Pacific Time) on September 7, 2017** (delivery service provider tracking number may be used to verify date of receipt) to the address below. Applications received after September 7, 2017 may be rejected and not scored.

Once the application is mailed or delivered in person, please send an email to Nathan Dean at [nathan.dean@arb.ca.gov](mailto:nathan.dean@arb.ca.gov) indicating that you have submitted an application. Sending this email informs CARB staff that your formal application is on the way and secures one of the five points provided for Application Completeness. A confirmation email will be sent within 24 hours to the applicant upon receipt of the hardcopy application. **No applications may be submitted by fax or email.**

*Solicitation Timeline \**

Key Actions	Dates	Time (Pacific)
Public Release of Solicitation	June 9, 2017	--
Applicant Question Deadline	July 3, 2017	5:00 pm
Applicant Teleconference	July 6, 2017	10:00 am
<b>Application Submittal Deadline</b>	<b>September 7, 2017</b>	<b>5:00 pm</b>
Preliminary Grantee Selection	October 20, 2017	5:00 pm
Final CEQA Documentation Submittal Deadline**	November 17, 2017	5:00 pm
Execute Grant Agreement and Return to CARB***	December 15, 2017	5:00 pm
Sub-Agreement Process Complete	January 12, 2018	5:00 pm

\* Timelines are subject to change at CARB's sole discretion.

\*\* This step only applies for projects containing infrastructure proposals where an agency other than CARB is the lead CEQA agency for the project.

\*\*\* Includes governing board resolution.

#### **XIV. APPLICANT TELECONFERENCE**

CARB will hold an Applicant Teleconference where staff will be available to answer questions potential applicants may have regarding eligibility, application completion, and other requirements. The Applicant Teleconference will take place on the following date and time:

Date: July 6, 2017  
Time: 10:00 a.m. – 12:00 p.m. (Pacific Time)  
Place: California Air Resources Board  
9528 Telstar Avenue  
El Monte, California 91731

##### **Teleconference Information:**

Call-in Phone Number: 888-950-8046  
International Number: 1-210-234-0044  
Passcode: 5157729

The Applicant Teleconference will be open to all interested entities and the intent is to provide potential project applicants with an opportunity to ask clarifying questions regarding this Solicitation package and the project requirements. Written questions submitted prior to the Applicant Teleconference will be given priority. Questions should be emailed to Nathan Dean at [nathan.dean@arb.ca.gov](mailto:nathan.dean@arb.ca.gov) up to 5:00 p.m. (Pacific Time) two business days prior to the Applicant Teleconference. The questions and answers from the Applicant Teleconference including those received via email will be posted on the CARB website by **5:00 p.m. (Pacific Time) on August 7, 2017**; this date may be extended at CARB's sole discretion. CARB will not answer questions regarding this Solicitation after the Applicant Teleconference. Any verbal communication with a CARB employee concerning this Solicitation is not binding on the State and shall in no way alter a specification, term, or condition of the Solicitation.

#### **XV. EVALUATION, SCORING, AND PRELIMINARY SELECTION**

CARB will evaluate all eligible project applications based on the same scoring criteria described below. The maximum score is 120 points. The qualified applicant(s) with the highest overall score(s) will be preliminarily selected as Grantee(s).

The preliminary selection of a project does not in any way commit CARB to approving the grant. The selected applicant will be required to sign a Grant Agreement with CARB to fulfill the duties of Grantee (see Appendix B). The Grant Agreement may not be executed unless and until any required CEQA review has been completed. For a project where an agency other than CARB is serving as lead CEQA agency, the applicant must submit any required final CEQA documents by November 17, 2017 (prior to execution of the Grant Agreement). If an applicant fails to meet this requirement, CARB may deny the grant application. CARB will independently review any CEQA documentation provided by the applicant. CARB may modify any Grant Agreement based upon information produced from the CEQA environmental review process. If

CARB in its sole discretion finds a project's CEQA documentation inadequate, CARB retains absolute sole discretion to either (1) modify the grant agreement as necessary to comply with CEQA, (2) select other feasible alternatives to avoid significant environmental impacts, or (3) deny the grant application.

No legal obligations will exist unless and until the parties have executed and delivered a Grant Agreement, as informed by information produced from the CEQA environmental review process (to the extent applicable). CARB, in its sole discretion, may cancel the proposed grant and make a selection to the next highest scoring project, and so on, until an agreement is reached, or exercise its right, in its sole discretion, throughout this process to not award a grant. CARB reserves the right, in its sole discretion, to cancel this Solicitation, re-solicit for a Grantee, or direct funding to another project in the Funding Plan. In the event funding has been awarded to the highest scoring project(s), and the remaining available funds are less than the amount requested in the next highest scoring application, CARB, in its sole discretion, may offer funding to the next highest scoring project(s) that request less than the remaining available funds, carry the remaining funds forward to the next fiscal year, shift the funds to another project category, or not award a grant.

It is anticipated that up to \$17,000,000 for all selected projects will be available under this Solicitation. If additional funds become available, and valid applications remain unfunded or if a funded application can be expanded beyond the original scope outlined in their application, those projects may be funded without reissuing a solicitation at CARB's sole discretion.

If two or more applications are submitted for the same project by different applicants, those applications will be scored separately, and the highest scoring project will then compete against applications submitted for different projects.

If the application involves technology that would not be demonstrated in conventional freight equipment<sup>16</sup> and the applicant is applying for the \$3 million available for non-freight categories, the applicant must describe how the successful demonstration of the technology could be freight enabling and support the California Sustainable Freight Action Plan.<sup>17</sup> This may include, but is not limited to, providing evidence showing strong potential for technology transfer from the non-freight application, in which the technology would be demonstrated, into a freight application. CARB, in its sole discretion, reserves the right to reject an application if staff has determined that the applicant has failed to adequately support the assertion that the demonstration is freight enabling. More details on the \$3 million for non-freight categories can be found in Section V, Available Funding.

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<sup>16</sup> Solely for the purposes of this Solicitation, the four freight categories and TRUs outlined in Section IX, Eligible Projects, will be considered conventional freight.

<sup>17</sup> CARB et al. California Sustainable Freight Action Plan; July 2016;  
<http://www.casustainablefreight.org/theplan.html>.

CARB reserves the right to remove discrete elements of projects selected for funding that CARB determines to be ineligible.

Applications that already have sub-agreements in place with all the proposed project partners may score more competitively under the Project Team Capabilities and Degree of Industry Collaboration Scoring Criteria 2, which is described in this section.

Only eligible projects will be scored, and only eligible equipment will be scored and considered for funding. To be eligible, applicants must demonstrate in the Project Narrative (see Appendix A, Attachment 2) that the proposed project would provide benefits to disadvantaged communities, as outlined in Section IX, Eligible Projects. Other elements are also required to be included in each application as indicated in this Solicitation (see the Required Application Elements area in Section XII, Application Requirements). Further information on determining benefits to or being located within disadvantaged communities can be found in Appendix A, Attachment 5.

In the event that one or more projects cannot be fully funded because the requested amount exceeds the available remaining funds, CARB in its sole discretion may offer to fund those projects at a lesser amount at a scaled down scope. If the project applicant declined funding at the reduced project scope, CARB may offer funding to the next highest scoring eligible application, either fully or at a scaled down scope, carry the remaining funds forward to the next fiscal year, shift funds to another project category, or not award a grant(s).

*Summary of Scoring Criteria for Demonstration Projects*

	<b>Scoring Criteria</b>	<b>Points</b>
1	Applicant Qualifications	5
2	Project Team Capabilities and Degree of Industry Collaboration	20
3	Project Objectives and Work Plan	15
4	Timeline for Project Completion	10
5	Budget, Match Funding, and Financial Capabilities	10
6	Potential Emission Reduction Benefits	10
7	Cost-Effectiveness	5
8	Benefits to Disadvantaged Communities	10
9	Technology and Innovation	15
10	Potential for Market Penetration and Commercialization	15
11	Application Completeness	5
	<b>TOTAL</b>	<b>120</b>

Applicants will be evaluated based on the Scoring Criteria. The Project Narrative and Work Plan must address how the applicant will implement all of the tasks in the proposed scope of work.

## Scoring Scale

Using the scoring scale below, the evaluation team will score each eligible application for each scoring criteria described within this Solicitation.

Possible Points	Interpretation	Explanation for Percentage Points
0%	Not Responsive	Response does not include or fails to address the requirements being scored. The omission(s), flaw(s), or defect(s) are significant and unacceptable.
10-30%	Minimally Responsive	Response minimally addresses the requirements being scored. The omission(s), flaw(s), or defect(s) are significant and unacceptable.
40-60%	Inadequate	Response addresses the requirements being scored, but there are one or more omissions, flaws, or defects or the requirements are addressed in such a limited way that it results in a low degree of confidence in the proposed solution.
70%	Adequate	Response adequately addresses the requirements being scored. Any omission(s), flaw(s), or defect(s) are inconsequential and acceptable.
80%	Good	Response fully addresses the requirements being scored with a good degree of confidence in the Applicant's response or proposed solution. No identified omission(s), flaw(s), or defect(s). Any identified weaknesses are minimal, inconsequential, and acceptable.
90%	Excellent	Response fully addresses the requirements being scored with a high degree of confidence in the Applicant's response or proposed solution. Applicant offers one or more enhancing features, methods, or approaches exceeding basic expectations.
100%	Exceptional	All requirements are addressed with the highest degree of confidence in the Applicant's response or proposed solution. The response exceeds the requirements in providing multiple enhancing features, a creative approach, or an exceptional solution.

The **PROJECT NARRATIVE** must separately address each of the scoring criteria listed below; see instructions for the Project Narrative in Appendix A, Attachment 2.

**1. Applicant Qualifications – 5 points**

Describe the experience and expertise the proposed Grantee has in implementing large-scale air quality incentive projects or programs and working with off-road vehicle and equipment manufacturers, technology providers, and other key project stakeholders. Scoring will be based on the applicant's ability to successfully act as Grantee according to their demonstrable staffing, infrastructure, funding, and other available resources.

**2. Project Team Capabilities and Degree of Industry Collaboration – 20 points**

- Proposals that identify the end user of the equipment to be used in the project, the technology manufacturer(s), the data analysis provider, and the Grantee will score higher than those that do not have all the needed participants identified in advance.
- Proposals that have all needed sub-agreements in place with the proposed project partners will score higher than those applications that do not have sub-agreements in place before the application is submitted.
- Describe the roles and the work to be performed by each of the project's key participants, including project administration, project planning, field demonstration, and data collection and reporting.
- Describe the administrative and technical qualifications and capabilities of key personnel, such as education and training, research and professional experience (which could include, but is not limited to, experience with advanced technology vehicle manufacturing, operation and maintenance of advanced technology vehicle fleets, zero-emission fueling infrastructure operation and maintenance, workforce training, and/or administering outreach and education programs), publications (patents, copyrights, and software systems may be provided in addition to or substituted for publications), and ability to administer similar air quality programs.
- Describe the capabilities of the project team to increase scalability of the technology after the project is successfully demonstrated. This could include, but is not limited to, ability or experience ramping up production in a timely manner, increasing sales volumes, performing production testing, and providing support for large scale volumes of products.
- Describe the project team's relationship and degree of collaboration with vehicle and charging/refueling infrastructure builders and technology manufacturer(s) on the proposed project. Describe what business alliances and partnerships will be involved in commercialization.



- Performance of the Grantee, technology manufacturer(s), and other project participants with previous AQIP projects will also be considered.

### **3. Project Objectives and Work Plan – 15 points**

- Provide a concise statement of how the project meets CARB's goals under the Off-Road Advanced Technology Demonstration Project Solicitation and the FY 2016-17 Funding Plan.
- In a logical sequence, describe the tasks necessary to prepare for and conduct a practical demonstration of the innovative technology(ies). Tasks should be divided into the phases of the project, as appropriate, and described in enough detail for reviewers to understand the scope of the work. Identify what entity (Grantee or industry partner) will perform each task.
- Provide quantitative milestones for each budget period of the project, and identify them with a number, title, and planned completion date. The general duration for each task must be specified. Identify at which milestones disbursement requests will be made, at what amounts, and the deliverables associated with each milestone.
- Identify the entities that will be using the pieces of equipment included in the project and how the Grantee will ensure data will be reported as required to CARB.
- Identify the resources (e.g., equipment, machine and electronic shops, field and laboratory facilities, materials, etc.) to be used at each performance site listed. Describe only those resources directly applicable to the proposed work, listing important items of equipment already available for this project. If proposing an equipment acquisition, describe comparable equipment, if any, already at your organization and explain why it cannot be used.
- Identify workforce training necessary to ensure successful execution and completion of the proposed demonstration project, including, but not limited to, training for vehicle operation, refueling, vehicle maintenance and repair, and data collection.
- Describe how the funded project equipment will be used and the expected dispositions of the funded project equipment and infrastructure after the end of the term of the grant agreement.
- For proposals that include near zero-emission equipment, specify the routes and/or conditions where project equipment will be operated in zero-emission only mode including zero-emission only operation within disadvantaged community ZIP codes, and, if applicable, describe the geofencing technology to be employed for ensuring and documenting that zero-emission only operation has occurred according to the project description.

- Identify the extent to which renewable sources of energy will be used to support the zero- or near zero-emission technologies to be demonstrated. Projects employing a higher percentage of renewable energy will score higher than those employing a lower percentage or no renewable energy.
- Identify any fueling, charging, or other related infrastructure already in place that will be utilized during the proposed demonstration project and the agreements planned or already in place to utilize the existing infrastructure.
- Specify if any mobile refueling will be included in the project and agreements planned or already in place to provide mobile refueling to funded equipment.
- Identify any infrastructure, including charging and refueling infrastructure, that will need to be installed to allow proper use of the equipment identified in the project and a brief description of the process for planning and installation. Identify the entities that will be doing the infrastructure installation and at what cost. Describe plans, if any, for future use of charging and refueling stations following the demonstration project.
- For proposals that include installation of a hydrogen refueling station to be funded as part of the project, provide a description of how all of the components of the Hydrogen Refueling Station Requirements (Appendix C) will be met. The proposal must include overall station performance parameters including, but not limited to, fuel quality, metering accuracy, fueling protocol, pressures, storage, compression, daily throughput, hourly peak throughput, and a plan that ensures these parameters are maintained.
- For projects that include electric vehicle supply equipment (e.g., charging stations), identify the analysis that has been accomplished, if any, to identify and/or address grid impacts during peak electricity demand hours.
- For proposals that include fueling or charging infrastructure installation to be funded as part of the project, include information showing the infrastructure is designed and engineered to match the specific minimum fueling/charging needs of the proposed fleet. The proposal must include descriptions of the station parameters that must be met and of the “space or area” where the parameters will be displayed. The description of the parameters must be appropriately placed in close proximity to the station and in an easily accessible area for the users of the fueling/charging equipment. Details must be provided explaining the existing similar infrastructure where the funded infrastructure is proposed to be sited (e.g., existing electrical infrastructure where proposed EVSE is to be sited, or an existing fueling station or industrial facility where a proposed hydrogen refueling station is to be sited). In cases where the applicant would make the funded infrastructure available to non-project fleets, the proposal must include information showing how the applicant will plan for capacity adjustments to handle the additional demand.

- The Project Objectives and Work Plan must address how the applicant will implement all of the tasks in the proposed scope of work.

#### **4. Timeline for Project Completion – 10 points**

- Provide a project schedule including the milestones as described in the Project Narrative and Work Plan section of Appendix A, Attachment 2. Both a tabular and graphic display (such as a Gantt chart) of the project schedule is preferred, but at a minimum, a tabular display is required. Information must include task duration, start and completion dates, and expected time to secure materials and construction services, in addition to the milestones being clearly identified. The milestones and timelines must also include all infrastructure installation that is to be funded as part of the project.
- Demonstrate that all work will be accomplished by March 30, 2020.

#### **5. Budget, Match Funding, and Financial Capabilities – 10 points**

- Provide a clear and concise project budget that lists all expenditures and the sources of funds in a logical sequence that leads to on-time completion of the project (see sample budget in Appendix A, Attachment 4). Administrative fees may not exceed 5 percent of the total amount awarded by CARB.
- Create a list of tasks required to successfully complete the demonstration and indicate the source of funding and amount of funds for each task.
- Clearly display the amount of funds being used as match for the project. Funds identified as match must also indicate what entity is providing the match and if the match is part of the cash match or in-kind match.
- Demonstrate that the Grantee and/or technology manufacturer(s) will be financially capable of providing the minimum 25 percent match requirement of the total project budget (including the 10 percent cash requirement exclusive of in-kind contributions). Higher match pledges will be scored higher. See section VI, Required Match Funds for more information.
- Describe each financial contribution to the project (match funding or other leveraged funding), and specifically indicate which current and pending funding sources would be used for the required cost share match. Identify if all or a portion of the match funding is dependent upon successful grant award under any other solicitation.
- Attach Letter(s) of Commitment from each project partner stating, if applicable, that it is committed to providing a specific minimum dollar amount of cost sharing as part of the match funding requirement or as other leveraged funding. Letters must be signed by the person authorized by the entity to commit the expenditure of funds.

## 6. Potential Emission Reduction Benefits – 10 points

- Describe in Appendix A, Attachment 3, the estimated reductions of GHG, criteria pollutant, and PM emissions as determined by using the methodology in Appendix D. Combined weighted criteria pollutant and PM emission reductions are to be based on exhaust emissions (tank to wheel) and calculated in tons reduced per year. The GHG emission reductions are to be based on life cycle analysis (well to wheel) and calculated in tons of CO<sub>2</sub> equivalent<sup>18</sup> reduced per year.
- **Show all math used in calculations.** Cite all sources and explain all variables used in the calculations not included in Appendix D.
- Describe the utility of the innovative technology to help California achieve its climate change and air quality goals by reducing GHG, criteria pollutant, and toxic air contaminant emissions, particularly in disadvantaged communities.
- Briefly describe what the emission benefits could be in California once the equipment is successfully demonstrated and commercially accepted. No calculations for this point are required, but discuss the inventory of the specific type of equipment being demonstrated and explain what level of widespread emission benefits could be achieved within the state once the technology is fully integrated into the marketplace.
- If an alternative methodology is used to calculate the emission reductions for this project, all math should be shown and all values should be cited. Alternative methodologies will not be used to score the project but may provide insight to the scoring team on the potential emission reductions of the project.

## 7. Cost-Effectiveness – 5 points

- Describe in Appendix A, Attachment 3 the estimated cost-effectiveness of the project in dollars per ton of combined criteria pollutant and weighted PM emissions reduced, and per ton of GHG emissions (in CO<sub>2</sub> equivalent) reduced for the two scenarios below, using the methodology in Appendix D:
  - during the actual proposed project over a 2-year demonstration; and
  - once deployed into the marketplace, one year post proposed demonstration with a useful life of ten years
- If an alternative methodology is used to calculate the project's cost-effectiveness for this project, all math should be shown and all values should be cited. Alternative methodologies will not be used to score the project but may provide insight to the scoring team on the potential emission reductions of the project.

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<sup>18</sup> "CO<sub>2</sub> equivalent" means the number of metric tons of CO<sub>2</sub> emissions with the same global warming potential as one metric ton of another greenhouse gas.

## **8. Benefits to Disadvantaged Communities – 10 points**

- Describe the location of the hub(s) where the project equipment will be domiciled, including the physical address with zip code.
- If the equipment will be operated in areas outside of the location stated, provide a general description of the routes to be driven by the project equipment including, but not limited to, names of the cities they will travel or operate in and amount of time spent in these different locations.
- For projects including near zero-emission equipment, describe how zero-emission only operation will be ensured while the project equipment is operating in disadvantaged community zip codes.
- Describe how the project will benefit a disadvantaged community. All projects must meet at least one of the criteria in CARB's Interim SB 535 Guidance for being located within, or providing benefit to, a disadvantaged community.<sup>19</sup>
- Describe how the proposed project addresses one or more common economic needs of disadvantaged communities, including, but not limited to, those listed in Appendix A, Attachment 5.
- Describe any community based organizations that support the proposed project and any plans for ongoing engagement with those organizations.
- For commitments from community groups that are part of the proposed project team, indicate the level of support and what role the community group will play in the proposed project.
- Projects that meet the criterion for being located within a disadvantaged community census tract will be scored higher than those that meet one of the criteria for providing a benefit to a disadvantaged community, but are not located within the census tract. Projects that do not meet any of the criteria in CARB's Interim SB 535 Guidance<sup>18</sup> will not be considered for funding.

## **9. Technology and Innovation – 15 points**

- Identify and describe the technological innovation that is the basis for the project. If the proposed technology is a component of a device or process, also describe the device or process. Descriptions should be understandable to reviewers who are not experts in the field. Cite (but do not include) patents if needed. Describe exactly what part of the technology is innovative, how it is innovative, and how it works.

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<sup>19</sup> Use the criteria contained in CARB's Interim SB 535 Guidance, Appendix A, to determine whether a project is located within a disadvantaged community or provides benefit to a disadvantaged community. This Guidance is also available at: <http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/final535-interim-guidance-11-3-2014.pdf>.

- Describe what safety measures are in place to ensure safe operation and maintenance of the equipment during operations, battery charging, refueling, equipment maintenance, and other situations where interactions with the equipment take place. Identify any specific issues that first responders, such as firefighters, police, etc., should be concerned with if an emergency is encountered, either due to internal or external forces, with the piece of equipment or infrastructure funded under this demonstration.
- Explain the technical advantages of the innovation, and document performance claims.
- Describe what type of emission testing has already been done on the proposed technology(ies), if applicable.
- Describe the potential to develop the technology beyond the demonstrated scope and transfer into other applications, duty-cycles, types of equipment, and/or mobile sectors.

**10. Potential for Market Penetration and Commercialization of the Technology – 15 points**

- Define target markets and explain why the targeted industries would buy the innovation after a successful demonstration project. Both markets within and outside of California should be considered.
- Describe the recent and expected growths or declines of the targeted industries.
- Identify the specific market niche for the proposed technology and describe its size and potential for growth.
- Describe any specific barriers to entry or expansion.
- Describe the commercialization plan for the proposed technology(ies).
- Describe what steps will be followed to gain CARB certification or verification of the proposed technology(ies).
- Describe the strategy for sustainable support after the successful demonstration of the technology. This could include, but is not limited to, special workforce training that will be required for installation and maintenance personnel, component replacement, technical support, and warranty support.
- Describe the economic benefits that a California business could expect if they operated zero- or near zero-emission equipment that is part of this demonstration.

## **11. Application Completeness – 5 points**

- Applications that are clear, concise, and include all of the requested information will be scored higher than those that are unclear or missing information. Do not make a declaration as to application completeness in your submittal.
- Provide a written affirmation in the Project Narrative that all parties participating in the demonstration have read and agree to abide by the Sample Grant Agreement that is included in this Solicitation packet as Appendix B, and confirm that they are committing to fulfill obligations detailed in the application package.
- One point is provided for sending CARB an email notification of a submitted application, as described in Section XIII, Application Instructions.

## **XVI. GRANTEE SELECTION**

The successful Grantee will be required to sign a Grant Agreement with CARB to fulfill the administrative duties and technical duties associated with the project (see Appendix B, Sample Grant Agreement). Signed Grant Agreements and approved governing board resolutions must be returned to CARB no later than the deadline described in the Solicitation Timeline in Section XIII of this Solicitation. If project Grant Agreements and approved governing board resolutions are not returned by the deadline, CARB, in its sole discretion, may deny the grant application and can redirect funds to another submitted application to this Solicitation or to another project in the Funding Plan as needed. If, in CARB's sole discretion, no submitted application meets the goals of this Solicitation, Funding Plan, or AQIP Guidelines, no selection of a Grantee or technology manufacturer will be made, and funding can be directed to another project identified in the Funding Plan as needed.

The Grant Agreement may not be executed unless and until any required CEQA review has been completed. For a project where an agency other than CARB is serving as lead CEQA agency, the applicant must submit any required final CEQA documents by November 17, 2017 (prior to execution of the Grant Agreement). If an applicant fails to meet this requirement, CARB may deny the grant application. CARB will independently review any CEQA documentation provided by the applicant. CARB may modify any Grant Agreement based upon information produced from the CEQA environmental review process. If CARB in its sole discretion finds a project's CEQA documentation inadequate, CARB retains absolute sole discretion to either (1) modify the grant agreement as necessary to comply with CEQA, (2) select other feasible alternatives to avoid significant environmental impacts, or (3) deny the grant application. No legal obligations will exist unless and until the parties have executed and delivered a mutually acceptable Grant Agreement, as informed by information produced from the CEQA environmental review process (to the extent applicable). See Appendix E for additional information.

CARB, in its sole discretion, may make minor changes to proposed milestones, work plan, or disbursement schedules in consultation with the applicant, for inclusion in the Grant Agreement.

NOTE: All CEQA requirements must be completed by November 17, 2017 and sub-agreements with all project partners must be executed by January 12, 2017.

## **XVII. IMPLEMENTATION PROCESS**

### **Meetings**

Before work begins, a kick-off meeting will be held in El Monte or Sacramento between the Grantee, the technology manufacturer(s), third-party data analysis provider, and CARB project management staff. The purpose of this meeting will be to discuss the work plan, details of task performance, the project schedule, any changes to the project team, and any issues that may need resolution before CARB-funded work begins. Project update meetings to discuss the project's progress will be held as often as needed, but typically monthly. These meetings can occur via telephone conference calls upon approval of the CARB Project Liaison. Scheduling project update meetings and preparing agendas are the responsibility of the Grantee. Project update meetings need to contain, but are not limited to:

- Agenda for the meeting with conference call information;
- Update of the status of the project;
- Discussion of any difficulties encountered since the last project update meeting;
- Discussion on any deliverables nearing a due date;
- Notification of any pending disbursement requests; and
- Scheduling of the next project update meeting.

Site visits by CARB staff may be required at CARB's sole discretion. A final meeting, or conference call pending CARB Project Liaison approval, will be held at the conclusion of the project to review the results and discuss the status of commercialization plans.

### **Project Funding Procedure**

In order to receive a disbursement, the Grantee must submit a grant disbursement request to CARB. The Grant Disbursement Request Form (see Appendix B, Exhibit C) must be signed by the party authorized and designated in the Grant Agreement and must include all information to substantiate the eligibility of costs to be reimbursed. GGRF grant funds will only be issued for vehicles, equipment, infrastructure, and associated services that are identified in the Project Narrative and Work Plan in the application package, memorialized in the signed Grant Agreement, and that have already been delivered. A detailed invoice will be required. A Progress Report on the status of the project to date, including the milestones for which the disbursement request is requesting reimbursement, is required with all disbursement requests. The advance of grant funds will not be allowed. All disbursements, including administration



and project funding, are made on a reimbursement basis after expenses are incurred by the grantee or other project partners.

Disbursements will be made following the procedure described in the Reporting and Monitoring Requirements subsection of this Solicitation and the signed Grant Agreement.

The Application package including the Budget submitted by an Applicant, if selected for funding, will be incorporated by reference as part of the Grant Agreement. Costs associated with administration detailed in the Application must consider the timeframe of the proposed project and may cover an increase in costs that take into account inflation or planned cost of living increases. The application submitted will be the actual costs for the project and will not be amended due to faulty estimations by the applicant, increases in costs due to inflation, or other reasons that have not been covered in the proposed budget.

### **Reporting and Monitoring Requirements**

The Grantee must submit numbered status reports accompanying grant disbursement requests to CARB at least every three months, but may submit on a monthly basis if necessary for more frequent invoicing with prior approval from CARB. These reports must be approved by CARB and must contain the following information, at a minimum, in either Microsoft Word or PDF, as a single electronic file:

- Project Status Report number, title of project, name of Grantee, date of submission, and project grant number;
- Summary of work completed since the last progress report, noting progress toward completion of tasks and milestones identified in the work plan;
- Statement of work expected to be completed by the next progress report;
- Notification of problems encountered and an assessment of their effects on the project's outcome;
- Data collected from equipment since the last data reporting, as deemed necessary by CARB or its designated third-party data analysis provider;
- Itemized invoice showing all costs for which reimbursement is being requested; and
- Discussion of the project's adherence to the project timeline.

A final report is required at the end of the project and must include:

- A description of the project's goals and objectives, methods, results of the demonstration, and future application of the technology; and
- An update on the commercialization prospects.

Final reports will be made public and posted on CARB's AQIP website.

Requests for additional information may be required by CARB, in its sole discretion, to evaluate reports and to determine if a monthly, quarterly, or final report is complete.

If the Grantee plans on pursuing official verification or certification of the emission reducing potential for its proposed technology, the Grantee must submit documentation in support of that verification or certification to CARB's Project Liaison. Any supporting documentation sent to CARB, U.S. EPA, or any other government agency granting certification or verification, must be concurrently submitted to the Project Liaison assigned to the project, as identified in the Grant Agreement (see Appendix B).

Any change in the project budget, redefining of deliverables, or extension of the project schedule must be approved in advance and in writing by the CARB Project Liaison and may require a Grant Agreement amendment. Once a grant is in place, minor changes to the work to be done or other project scope changes may be considered by CARB, in consultation with the Grantee or technology manufacturer(s). CARB reserves the right to terminate a Grant Agreement if CARB determines, in its sole discretion, that the objectives cannot be reached or that the Grantee, technology manufacturer(s), or their subcontractors cannot or will not perform the required work in a timely manner, as specified in Exhibit A, Section 7 of the Grant Agreement.

The Grantee and technology manufacturer(s) must allow CARB, the California Department of Finance, the California Bureau of State Audits, or any authorized designee access, during normal business hours, to conduct reviews and fiscal audits or other evaluations. Access includes, but is not limited to, reviewing project records, site visits, interviews, and other evaluations as needed. Project evaluations or site visits may occur unannounced as CARB staff or its designee deem necessary.

## **XVIII. ADMINISTRATION**

### **A. Cost of Developing Application**

The Applicant is responsible for the cost of developing an Application, and this cost cannot be charged to the State. In addition, CARB is not liable for any costs incurred during environmental review or as a result of withdrawing a proposed award or canceling the Solicitation.

### **B. Errors**

If an Applicant discovers any ambiguity, conflict, discrepancy, omission, or other error in the Solicitation, the Applicant shall immediately notify CARB of such error in writing and request modification or clarification of the document. CARB shall not be responsible for failure to correct errors.

### **C. Immaterial Defect**

CARB may waive any immaterial defect or deviation contained in an Applicant's application. CARB's waiver shall in no way modify the Application or excuse the successful Applicant from full compliance.

#### D. Disposition of Applicant's Documents

On the date that the Grant Agreement is signed, all applications and related material submitted in response to this Solicitation become a part of the property of the State and public record.

#### E. Applicant's Admonishment

This Solicitation contains the instructions governing the requirements for funding projects submitted by interested Applicants, including the format in which the information is to be submitted, the material to be included, the requirements that must be met to be eligible for consideration, and Applicant responsibilities. Applicants must take the responsibility to carefully read the entire Solicitation, ask appropriate questions in a timely manner, submit the application with all required responses in a complete manner by the required date and time, and make sure that all procedures and requirements of the Solicitation are followed and appropriately addressed.

#### F. Agreement Requirements

The content of this Solicitation and each grantee application shall be incorporated by reference into the final agreement. See the sample Agreement terms and conditions included in Appendix B of this Solicitation.

CARB reserves the right to negotiate with Applicants to modify the project scope, the level of funding, or both. If CARB is unable to successfully negotiate and execute a funding agreement with an Applicant, CARB, in its sole discretion, reserves the right to withdraw the pending award and fund the next highest ranked eligible project. This does not limit CARB's ability to withdraw a proposed award for other reasons, including for no cause.

#### G. No Agreement Until Signed

No agreement between CARB and the successful grantee is in effect until the agreement is signed by the grantee and signed by the authorized CARB representative. Costs are only subject to reimbursement by CARB after execution; no costs incurred prior to execution of the agreement are reimbursable using CARB funds.

#### H. No Modifications to the General Provisions

Because time is of the essence, if an Applicant at any time, including after Preliminary Grantee Selection, attempts to negotiate, or otherwise seeks modification of, the General Conditions (attached as Appendix B, Sample Grant Agreement Section 10), CARB may reject an application or withdraw a proposed award. This does not alter or limit CARB's ability to withdraw a proposed award for other reasons, including failure of a third party agency to complete CEQA review, or for no cause.

#### I. Payment of Prevailing Wages

All applicants must read and pay particular attention to Appendix B, Sample Grant Agreement Section 10.17, entitled "Prevailing wages and labor compliance." Prevailing wage rates can be significantly higher than non-prevailing wage rates. Failure to pay legally-required prevailing wage rates can result in substantial damages and financial

penalties, termination of the grant agreement, disruption of projects, and other complications.

J. Solicitation Cancellation and Amendments

CARB reserves the right to do any of the following:

- Cancel this Solicitation.
- Revise the amount of funds available under this Solicitation.
- Amend this Solicitation as needed.
- Reject any or all Applications received in response to this Solicitation.